

List of Bid Items
METAL ROOFING

- ITEM 1 Metal Roofing – Exposed fasteners – Rib Panels System includes all items in Spec. sections 2.1, 2.2, 2.3.
- ITEM 2 Metal Roofing – Concealed fasteners – Standing Seam System includes all items in Spec. sections 2.1, 2.2, 2.3.
- ITEM 3 Add items (installed). See unit pricing.

SPECIFICATIONS FOR METAL ROOFING

PART 1 – GENERAL

1.1 SCOPE

This specification covers the installation and material requirements for the re-roofing of public housing units. Contracting to accomplish this work shall be the responsibility of the public housing agency (PHA) involved.

1.2 SCOPE OF WORK

Provide all labor, materials and equipment required to install new metal roofing on existing roofs. Optional work includes the replacement of rotted wood.

1.3 QUALITY ASSURANCE

- A. Manufacturer shall have a minimum of five years experience in the manufacture of metal roofing.
- B. Roofing installer shall have a minimum of one-year experience in the application of metal roofing. Installation of metal roofing and substrate preparation must meet the requirements of the manufacturer's published instructions.

1.4 SUBMITTALS

Manufacturer's Literature: Material description and recommended installation instructions, or wrapper showing installation instructions.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Store materials on raised platform or pallets and protect with coverings if stored in the weather. **KEEP DRY!**
- B. Store rolled goods on end. **KEEP DRY!**

1.6 JOB CONDITIONS

- A. Do not install underlayment or metal roofing on wet surfaces.

1.7 WARRANTY

- A. Materials: Manufacturer's Limited Material Warranty terms and conditions to apply.
- B. Workmanship: Bids shall include applicators'/contractors' full coverage warranty

(100%) against defects in labor for two years, from the date of completion of the job. Manufacturer shall be responsible for 100% of defects in labor and materials for 1 year from date of completed and PHA accepted roof, and prorate thereafter for the limited warranty.

- C. Bid Procedures: The base bid shall include a Limited Warranty for a period of 40 years, as well as the full coverage workmanship warranty.

1.8 TEAR-OFF VS SUPERIMPOSITION (Note: Tear-off not included in pricing).

The PHA shall make the decision regarding tear-off of the existing roof or superimposition of the new roof over the existing roof. The major considerations in making this decision are as follows:

- A. The load carrying capacity of the roof structure to support the existing roof(s), workmen, equipment and the new roofing material.
- B. Must meet the local building code. Usually a maximum of two roofs (original and one re-roof) may be installed before tear-off becomes mandatory.
- C. In general, roofs covered with asphalt shingles can remain in place and be re-roofed. Tile, slate or cedar shake roofs shall be removed because of the irregular surface.

PART 2 – PRODUCT SELECTION

2.1 METAL ROOFING

- A. Exposed fastener system with screw fasteners that are visible on the exterior of the roof surface after installation. See fasteners (2.2).
- or -
- B. Concealed Fastener system (standing seam panels) with fasteners completely concealed and protected by the roof surface.

Both A and B products include all ridge vents, necessary and required drip edges, rake trim, preformed valleys, and flashing in same metal as roof panels. All exposed roofing metal, trim and flashing shall be of a chosen color from manufacturers standard selection. Contractor shall furnish two (2) actual samples for final selection.

A above is available in 26 and 29 gauge. B above can be provided in only 26 gauge metal. All metal to be premium steel with an aluminum, zinc and silicone anti-corrosion coating (galvalume). Coating for steel coil coating systems designed exclusively for metal construction industry shall be considered equal.

- C. Underlayment shall be an alternative to the ASTM D226, type I and type II roofing underlayment specified in IBC chapter 15 and IRC chapter 9.

Shall consist of woven, extrusion-coated polypropylene fabric containing micro-perforations and shall be supplied in rolls 48 wide and have a nominal thickness of 8 mills. The underlayment must comply with the applicable code and the manufacturers published installation instructions. It must be laid horizontally (parallel to the eave), printed side up starting at the eave with minimum 4-inch horizontal (head) laps and 12-inch vertical laps. Apply on dry surface free of dust, dirt, loose nails and other protrusions.

2.2 FASTENERS

- A. Self drilling through metal panel into wood substrate. Minimum wood penetration -1". ¼" hex washer head. Thread major dia. .181-175 – thread minor dia. .133 - .127. Tensile: 1500. Torsional: 80 in-lbs minimum. Shear: 833 Assembled with a control seal washer for a consistent weather tight seal. Zinc plated and coated for corrosion protection.

2.3 SOFFIT VENT

- A. Shall be installed in accordance with manufacturer's instructions.
- B. Comply with HUD Minimum Property Standards for ventilation rate.
- C. Vent shall be as similarly constructed and be of similar materials as H.C. Products Company, Vent – A – Strip with Soffit Louvers.

2.4 GUTTERS

Gutters shall be fabricated of 0.027 inch thick aluminum roll. Gutters shall be hung with high points equidistant from down spout. Lap joint, except for expansion joints shall be at least one inch thick in the direction of flow. Secure aluminum gutter to the fascia with nails (7") and sparrows of aluminum brackets at intervals not exceeding 32 inches.

2.5 DOWNSPOUTS

Downspouts shall be fabricated of 0.027 inch thick aluminum roll. Wall anchors shall be formed from two inch wide 0.027 inch thick aluminum. Downspouts shall be set plumb and clear of wall. Each section of downspouts shall be anchored to wall at top and bottom shall be slotted to allow not less than ½ inch movement for each 10 feet of down spout. Elbows, offsets and shores are to be provided where required.

- 2.6 FINISH: Aluminum gutter and down spouts shall be baked enamel.

PART 3 – DESCRIPTION OF WORK

3.0 REMOVAL OF EXISTING ROOF

- A. Replace all rotted or deteriorated wood as required by the PHA and replace with similar new wood all in connection with the roof work as a unit price item.
- B. Re-nail all loose sheathing or decking.
- C. Remove old worn gutters and down spouts as required by the PHA and replace (furnish and installed) with new corrosion resistant metal gutter and down spouts as a unit price (remove, furnish and install).
- D. Furnish and install metal roofing and underlayment (see 2.1).

3.1 SUBSTRATE PREPARATION AFTER REMOVAL OF OLD ROOF AND LIAISON WITH PHA

- A. Roof surface shall be firm, sound, dry, and broom-cleaned before any roofing is applied.
- B. The contractor shall remove debris from the project site as the work progresses. All removed debris shall become the property of the contractor or by the PHA if so directed by the PHA.
- C. Contractor shall be responsible for picking up all fasteners by whatever means to assure a complete job.

3.2 TEAR-OFF VS SUPERIMPOSITION

The PHA shall make the decision regarding tear-off of the existing roof or superimposition of the new roof over the existing roof. The major considerations in making this decision are as follows:

- A. The load carrying capacity of the roof structure to support the existing roof(s), workman, equipment and the new roofing material.
- B. The condition of the existing roofing.
- C. Meeting the local building code. Usually a maximum of two roofs (original and one re-roof) may be installed before tear-off becomes mandatory.
- D. In general, roofs covered with asphalt shingles can remain in place and be re-roofed. Tile, slate or cedar shake roofs shall be removed because of the irregular surface and difficulty of nailing. Interlocking type shingles can cause an unevenness of the new re-roofed surface.

**BID/SUMMARY PRICE SHEET FOR
METAL ROOFING**

CPC Bid Number: _____ **Bid Date:** _____
(Available on Invitation to Bid)

Name of Firm: _____ **Contact:** _____

Address: _____

Email: _____ **Phone:** _____

Manufacturer: _____ **Model No. / Name:** _____

Item No. 1a – Exposed Fasteners (26 gauge): _____

Item No. 1b – Exposed Fasteners (29 gauge): _____

Item No. 2 – Concealed Fasteners (29 gauge): _____

Add Items (Installed):

Remove & Replace Gutters (LF) _____

Remove & Replace Downspouts (LF) _____

Soffit Vent (LF) _____

Bath (Or Range Hood) Exhaust Cap (EA) _____

Replace 3 Lb. Lead Boot Flashing (EA) _____

Neoprene 3-In-1 Pipe Boot (EA) _____

Zipper Boot (Electrical) (EA) _____

Replace Base Flashing for HWH/Furnace Vent Stack (EA) _____

Replace Rotten Roof Deck Sheathing w/ New Sheathing
To Match Thickness of Existing (SF) _____

Go Over Existing Sheathing w/ New OSB Board (SF) _____

Replace Other Rotten Wood: Rakes (LF) _____

Replace Other Rotten Wood: Rafters (LF) _____

Replace Other Rotten Wood: Fascia (SF) _____

Replace Other Rotten Wood: Soffit (SF) _____

Remove Existing Shingles – One (1) Layer
Including Price for Installing Underlayment (See 3.2): _____

Remove Existing Shingles – Two (2) Layers
Including Price for Installing Underlayment (See 3.2): _____

Delivery: _____ **Terms:** _____